

## ABSTRACT OF THE DISCLOSURE

A method for controlling a compression ignition internal combustion engine exhaust gas recirculation (EGR) system having an EGR valve and actuator. The method includes continuously monitoring at least one engine parameter in real-time, and continuously adjusting an EGR valve position using a control signal in  
5 real-time in response to the at least one parameter and in response to at least one delay, wherein one of the at least one delays corresponds to an EGR actuator delay.